ABSTRACT OF THE DISCLOSURE

In accordance with the present invention, there is provided a process for producing a polymer by a living radical polymerization method which is also applicable to the polymerization of a methacrylate monomer, and a methacrylate-based polymer having a narrow molecular weight distribution which is produced by the above process. Specifically, the present invention relates to a process for producing a methacrylate-based polymer by a atom transfer radical polymerization method in which a polymerizable monomer containing at least one methacrylate monomer is polymerized in the presence of a redox catalyst comprising a metal complex containing at least one transition metal as a central metal selected from the group consisting of elements of Groups 7 to 11 of the Periodic Table, using an organohalogen compound or a halogenated sulfonyl compound as a polymerization initiator.